

**United Nations
Environment
Programme**Distr.
GENERALUNEP/OzL.Pro/ExCom/97/35
23 October 2025

ORIGINAL: ENGLISH



EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-seventh Meeting
Montreal, 1–5 December 2025
Items 9(c) and (d) of the provisional agenda¹

PROJECT PROPOSALS: ANGOLA

This document consists of the comments and recommendation of the Secretariat on the following project proposals:

Phase-out

- | | | |
|---|------|--------------------------|
| • HCFC phase-out management plan (stage II, third tranche) | UNDP | Blanket approval |
| • HCFC phase-out management plan (stage III, first tranche) | UNDP | Individual consideration |

Phase-down

- | | | |
|---|------|--------------------------|
| • Kigali HFC implementation plan (stage I, first tranche) | UNDP | Individual consideration |
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¹ UNEP/OzL.Pro/ExCom/97/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Angola

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNDP (lead)	79 th	67.5% phase-out by 2025

(II) LATEST ARTICLE 7 DATA (Annex C, Group I)	Year: 2024	2.75 ODP tonnes
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2024	
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					2.38				2.38
HCFC-141b					0.37				0.37

(IV) CONSUMPTION DATA (ODP tonnes)			
2009–2010 baseline:	15.95	Starting point for sustained aggregate reductions:	15.95
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	10.77	Remaining:	5.18

(V) ENDORSED BUSINESS PLAN		2025	2026	2027	Total
UNDP	ODS phase-out (ODP tonnes)	0.92	0.00	0.00	0.92
	Funding (US \$)	96,728	0	0	96,728

(VI) PROJECT DATA			2017	2018-2019	2020	2021	2022-2024	2025	Total
Montreal Protocol consumption limits (ODP tonnes)			14.36	14.36	10.37	10.37	10.37	5.18	n/a
Maximum allowable consumption (ODP tonnes)			14.36	14.36	10.37	10.37	10.37	5.18	n/a
Funding agreed in principle (US \$)	UNDP	Project costs	450,000	0	0	363,600	0	90,400	904,000
		Support costs	31,500	0	0	25,452	0	6,328	63,280
Funds approved by ExCom (US \$)		Project costs	450,000			363,600			813,600
		Support costs	31,500			25,452			56,952
Total funds recommended for approval at this meeting (US \$)		Project costs						90,400	90,400
		Support costs						6,328	6,328

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of Angola, UNDP as the designated implementing agency has submitted a request for funding for the third and final tranche of stage II of the HCFC phase-out management plan (HPMP), in the amount of US \$90,400, plus agency support costs of US \$6,328.² The submission includes a progress report on the implementation of the second tranche, the verification report on HCFC consumption for 2021 to 2024, and the tranche implementation plan for 2026.

Report on HCFC consumption

2. The Government of Angola reported a consumption of 2.75 ODP tonnes of HCFCs in 2024, which is 83 per cent below the HCFC baseline for compliance. The 2020–2024 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in Angola (2020–2024 Article 7 data)

HCFC	2020	2021	2022	2023	2024	Baseline
Metric tonnes (mt)						
HCFC-22	158.50	125.00	87.00	69.45	43.26	290.00
HCFC-141b	4.00	0.00	4.00	0.00	3.38	0.00
Total (mt)	162.50	125.00	91.00	69.45	46.64	290.00
ODP tonnes						
HCFC-22	8.72	6.88	4.79	3.82	2.38	15.95
HCFC-141b	0.44	0.00	0.44	0.00	0.37	0.00
Total (ODP tonnes)	9.16	6.88	5.23	3.82	2.75	15.95

3. HCFC-22 consumption has been decreasing due to the implementation of the activities under the HPMP, particularly the enforcement of the licensing and quota system, training of customs officers, and improved servicing practices and containment strategies in the refrigeration servicing sector. In addition, the rising cost of HCFC-22 and increased availability of HFC-based equipment on the market (mainly based on R-410A and R-404A refrigerants) also contributed to the reduced use of HCFC-22. HCFC-141b was imported in 2020, 2022 and 2024 only for use in flushing refrigeration circuits, which will be addressed through regulations and import quotas in stage III of the HPMP.

Country programme implementation report

4. The Government of Angola reported HCFC sector consumption data under the 2024 country programme (CP) implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

Verification report

5. The verification report confirmed that the Government was implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2021 to 2024 was correct (as shown in table 1 above). The verification concluded that Angola is in compliance with the Montreal Protocol. Recommendations include banning the import of HCFC-based equipment, promoting alternatives to HCFC-141b used for flushing, raising awareness to large end users of HCFC-22-based equipment to encourage replacement of their systems, and requesting customs to provide relevant import/export data to the national ozone unit (NOU) at least twice per year. UNDP indicated that these recommendations will be implemented as part of the HPMP and stage I of the Kigali HFC implementation plan (KIP) as relevant.

² As per the letter of 10 September 2025 from the Ministry of Environment of Angola to UNDP.

Progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan

Legal framework

6. The Government of Angola ratified the Kigali Amendment on 16 November 2020 and has had in place an operational HCFC licensing and quota system since 2011. Quota allowances of HCFCs have been updated to 2030 to ensure their phase-out. As recommended by the verification report, the online quota and licensing system is ready to be installed. This will be implemented together with the HFC system under the KIP.

Refrigeration servicing sector

7. Activities implemented under the second tranche include:

- (a) *Strengthening of the enforcement capacity to control the HCFC consumption:* Updated the material for customs officers training courses; conducted five training courses for 145 customs officers and 30 law enforcement stakeholders on ODS legislation including customs codes, the prevention of illegal ODS trade, refrigerant identification, and refrigeration and air-conditioning (RAC) equipment inspection; developed and distributed 3,000 units of ODS phase-out control measure calendars to key stakeholders; and printed the guidelines and information tools to support the screening of ODS and distributed them among the customs officers trained;
- (b) *Capacity-building and awareness-raising of the RAC servicing sector and end users to eliminate the consumption of HCFCs:* Held one train-the-trainer seminar for 35 trainers on good servicing practices and the adoption of alternative refrigerants, with an emphasis on low-global-warming-potential refrigerants; held a six-day training workshop for 90 refrigeration technicians in good servicing practices, refrigerant recovery and recycling techniques, and the safe handling of flammable refrigerants; and carried out awareness-raising activities including materials distributed at training courses and events as well as social media campaigns; and
- (c) *Strengthening of the recovery and recycling network and vocational training institutions:* Procured and delivered tools and equipment for servicing technicians and five recovery and recycling centres, including tool kits (80 sets), recovery systems (35), recovery cylinders, vacuum pumps, and refrigerant identifiers (10, to be delivered).

Project implementation and monitoring

8. The NOU monitored and coordinated the HPMP implementation. Of the US \$36,090 budgeted for the second tranche, US \$10,000 was disbursed (US \$2,000 for meetings and US \$8,000 for monitoring-related travels).

Level of fund disbursement

9. As of August 2025, of the US \$813,600 approved so far, US \$581,929 had been disbursed, as shown in table 2. The balance of US \$231,671 will be disbursed in 2026.

Table 2. Financial report of stage II of the HPMP for Angola (US \$)

Funding tranche	Funds approved	Funds disbursed	Disbursement rate (%)	Fund balance
First	450,000	450,000	100	0
Second	363,600	131,929	36	231,671
Total	813,600	581,929	72	231,671

Implementation plan for the third and final tranche of stage II of the HCFC phase-out management plan

10. The following activities will be implemented between January 2026 and December 2026:
- (a) *Capacity-building and awareness-raising of the RAC servicing sector and end users to eliminate the consumption of HCFCs:* Develop an updated technician training manual and a trainers guide to include hydrocarbon and CO₂ refrigerants; hold three workshops to train 30 trainers using the updated manual, including one specifically on CO₂; and hold a six-day training workshop for at least 70 refrigeration technicians in good servicing practices, recovery and recycling techniques, and the safe handling of flammable refrigerants (US \$50,890);
 - (b) *Strengthening of the recovery and recycling network and vocational training institutions:* Develop a model for the operation of a recovery and recycling network, and deliver remaining equipment (funds from the previous tranche); and
 - (c) *Monitoring, coordination and reporting (US \$39,510):* Coordinate and monitor the HPMP through meetings and site visits, and organize a coordination committee among the NOU, UNDP, and the Ministry of Environment to consider new training capacities and the adoption of alternative technologies; includes a national consultant (US \$20,000), meetings and workshops (US \$4,510), and monitoring visits (US \$15,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan

Legal framework

11. The Government of Angola has issued HCFC import quotas for 2025 and 2026 at 3.96 and 3.03 ODP tonnes, which are lower than the Montreal Protocol control targets.

12. The implementation of regulatory measures restricting the import of HCFC-141b for flushing and HCFC-based equipment was delayed due to several institutional changes within the Government and the NOU. As a result, it has not been possible to initiate the legal process for these measures. UNDP confirmed that a draft proposal for the ban on the import of HCFC-141b and HCFC-based equipment was developed by a consultant and submitted to the NOU for consideration in August 2025. It is expected that the ban on the import of HCFC-141b will be enacted by the end of 2026, and the ban on HCFC-based equipment will be established by the end of 2027.

Refrigeration servicing sector

13. The Secretariat noted that HCFC-22 is the only substance included in the baseline and is used solely in the refrigeration servicing sector. However, in recent years, small quantities of HCFC-141b have been imported and used as a flushing agent due to its low cost and good performance. These imports are managed through the national licensing and quota system. UNDP confirmed that HCFC-free alternatives to HCFC-141b as a flushing agent have been introduced through training activities and engagement with suppliers. The Government has agreed to eliminate this use by establishing a zero quota and, eventually, a ban on its import, as discussed in paragraph 12.

Gender policy implementation

14. In consideration of the Multilateral Fund gender policy, and as part of the commitment to inclusive capacity-building and equitable participation in the RAC servicing sector, a registry system is being developed to monitor the number of female technicians participating in training programmes, which has been steadily increasing, alongside other metrics related to training activities and broader implementation efforts under the Montreal Protocol.

Completion of stage II of the HCFC phase-out management plan

15. UNDP has confirmed that stage II for Angola will be completed on 31 December 2026 as established in paragraph 14 of the Agreement.

Sustainability of the HCFC phase-out and assessment of risks

16. Angola has established an operational licensing and quota system to ensure compliance with the targets of the Montreal Protocol and the Agreement with the Executive Committee. Issues related to ODS control are integrated into customs training, and the curriculum is reviewed regularly to incorporate new requirements into the training manual. Customs officers are trained and updated annually on the use of refrigerant identifiers.

17. However, recent institutional changes within the Government and the turnover of customs officers have weakened national capacity for monitoring and controlling HCFC imports. To address this, training and technical assistance by international consultants have been planned under the HPMP to strengthen the capacity of customs officers. Refrigerant recovery equipment and tools have also been delivered to professional training centres to facilitate instruction in good servicing practices and promote refrigerant recovery.

18. Regulatory bans are currently being developed to control the import of HCFC-141b and HCFC-based equipment. The recommendations from the verification report will be implemented during the third tranche of stage II. Collectively, these measures will contribute to the sustainability of the HCFC phase-out and the strengthening of national institutional capacity.

Conclusion

19. The Government of Angola continues to enforce a licensing and quota system to control the import of HCFCs. Verified consumption levels from 2021 to 2024 were below the maximum allowable consumption. The current national consumption represents only 27 per cent of the maximum allowable consumption target established under the Agreement. Implementation of the second tranche is progressing despite recent institutional changes, and training activities have been provided to customs officers and refrigeration technicians. Equipment and tools have been delivered to further strengthen the refrigerant recovery and recycling network and training institutions, thereby supporting the sustainability of the HCFC phase-out achieved and facilitating compliance with future reduction targets. The disbursement rate has reached 100 per cent for the first tranche and 36 per cent for the second tranche.

RECOMMENDATION

20. The Fund Secretariat recommends that the Executive Committee note the progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan (HPMP) for Angola, and further recommends blanket approval of the third and final tranche of stage II of the HPMP

and the corresponding 2026 tranche implementation plan for Angola at the funding level shown in the table below:

	Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage II, third tranche)	90,400	6,328	UNDP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Angola

(I) PROJECT TITLE	AGENCY
HCFC phase-out plan (stage III)	UNDP (lead)

(II) LATEST ARTICLE 7 DATA (Annex C, Group I)	Year: 2024	2.75 ODP tonnes
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(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)								Year: 2024	
Chemical	Aerosol	Foam	Firefighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					2.38				2.38
HCFC-141b					0.37				0.37

(IV) CONSUMPTION DATA (ODP tonnes)			
2009–2010 baseline:	15.95	Starting point for sustained aggregate reductions:	15.95
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	10.77	Remaining:	5.18

(V) ENDORSED BUSINESS PLAN		2025	2026	2027	Total
UNDP	ODS phase-out (ODP tonnes)	2.10	0.00	3.10	5.20
	Funding (US \$)	300,000*	0	312,000	520,000

* Including US \$92,000 for UNDP for additional activities to maintain energy efficiency in line with decision 89/6.

(VI) PROJECT DATA			2025	2026–2027	2028	2029	2030	Total
Montreal Protocol consumption limits (ODP tonnes)			5.18	5.18	5.18	5.18	0	n/a
Maximum allowable consumption (ODP tonnes)			5.18	5.18	5.18	5.18	0	n/a
Project costs requested in principle (US \$)	UNDP	Project costs	258,689	0	179,489	0	81,822	520,000
		Support costs	18,108	0	12,564	0	5,728	36,400
Total amounts recommended in principle (US \$)	Project costs		258,689	0	179,489	0	81,822	520,000
	Support costs		18,108	0	12,564	0	5,728	36,400
	Total funds		276,797	0	192,053	0	87,550	556,400

(VII) Request for approval of funding for the first tranche (2025)		
Implementing agency	Funds recommended (US \$)	Support costs (US \$)
UNDP	258,689	18,108
Total	258,689	18,108

Secretariat's recommendation:	Individual consideration
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PROJECT DESCRIPTION

Background

21. On behalf of the Government of Angola, UNDP as the designated implementing agency has submitted a request for stage III of the HCFC phase-out management plan (HPMP), in the amount of US \$520,000, plus agency support costs of US \$36,400, as originally submitted.³ The implementation of stage III of the HPMP will phase out the remaining consumption of HCFCs by 2030.

22. The first tranche of stage III of the HPMP being requested at this meeting amounts to US \$258,689, plus agency support costs of US \$18,108, for UNDP, as originally submitted.

Status of implementation of stage II of the HCFC phase-out management plan

23. Stage II of the HPMP for Angola was approved at the 79th meeting⁴ to phase out 9.18 ODP tonnes of HCFCs used in the refrigeration and air-conditioning (RAC) servicing sector and to meet the 67.5 per cent reduction from the baseline by 2025, at a total cost of US \$904,000, plus agency support costs. An overview of the implementation of stage II, including the analysis of HCFC consumption; progress and financial reports on the implementation; and the request for the third and final tranche submitted to the current meeting, is available in paragraphs 1 to 20 of the present document.

Stage III of the HCFC phase-out management plan

Remaining consumption eligible for funding

24. After deducting 10.77 ODP tonnes of HCFCs associated with stages I and II of the HPMP, the remaining consumption eligible for funding in stage III amounts to 5.18 ODP tonnes of HCFCs.

Sector distribution of HCFCs

25. There are approximately 19,500 RAC technicians (600 women) and 1,870 workshops operating in the servicing sector, consuming HCFC-22 to service domestic and commercial air-conditioning (AC) equipment, commercial stand-alone and condensing refrigeration units, and commercial centralized systems, as shown in table 3; HCFC-141b is also imported intermittently for use in flushing refrigeration circuits. HCFC-22 represents 2.4 per cent of refrigerants used in the servicing sector in metric tonnes, along with HFC-134a (24.0 per cent), R-407C (23.6 per cent), R-404A (16.1 per cent), and other HFCs (33.9 per cent).

Table 3. Estimation of demand for HCFC-22 in the RAC servicing sector in Angola

Sector/Application	(a)	(b)	(c) = (a)*(b)	(d)	(c)*(d)
	Equipment inventory	Average charge (kg)	HCFC bank (mt)	Estimated bank refilled during servicing (%)	Annual need for servicing (mt)
Room AC (unitary and split)	417,067	1.00	417.07	7.00	29.19
Commercial AC (rooftop, multi-split units, chillers)	6,760	10.00	67.60	6.50	4.39
Commercial refrigeration (stand-alone and condensing units)	31,969	0.50	16.00	11.50	1.84

³ As per the letter of 10 September 2025 from the Ministry of Environment of Angola to UNDP.

⁴ Decision 79/32.

Sector/Application	(a)	(b)	(c) = (a)*(b)	(d)	(c)*(d)
	Equipment inventory	Average charge (kg)	HCFC bank (mt)	Estimated bank refilled during servicing (%)	Annual need for servicing (mt)
Industrial refrigeration (medium to large condensing units, centralized systems)	660	45.00	29.70	15.00	4.46
Total	456,456	-	530.37	-	39.88

Phase-out strategy

26. The Government of Angola proposes to completely phase out HCFCs by 2030 with a servicing tail until 2040 in line with the Montreal Protocol. Stage III of the HPMP will focus on ensuring the complete elimination of HCFC consumption, strengthening the regulatory framework to support compliance, building technical capacities to service equipment with low-global-warming-potential (GWP) alternatives, refrigerant recovery and reuse, and outreach activities to raise awareness among technicians and large users of HCFC-based equipment. Stage III of the HPMP will be implemented in coordination with stage I of the KIP, also submitted to the present meeting, to ensure efficiency and avoid duplication.

Proposed activities

27. Activities proposed for implementation in the servicing sector under stage III and in the first tranche and their cost breakdown are presented in table 4.

Table 4. Servicing sector activities and their costs under stage III of the HPMP for Angola as submitted

Activity	Cost (US \$)	
	Stage III	First tranche
<i>Strengthening the regulatory framework (US \$61,500)</i>		
Review and update the regulatory framework to support the complete phase-out of HCFCs and strengthen the licensing and quota system for HCFC import controls.	36,000	18,000
Form a steering committee and coordinate with key stakeholders (hold at least two meetings) to establish bans on the import of HCFC-141b and HCFC-based RAC equipment.	25,500	12,750
<i>Customs capacity-building (US \$102,000)</i>		
Update the border control handbook to include HCFCs; hold six workshops to train 120 customs officers on trade control, identifying new substances, and prevention of illegal trade; hold six workshops to train 120 brokers and importers on HCFC regulations and compliance with the Montreal Protocol.	102,000	35,700
<i>RAC technician capacity-building (US \$150,020)</i>		
Equip five RAC training centres with training equipment for hydrocarbon-based systems, including one with additional equipment for CO ₂ -based systems. ⁵	136,900	85,520
Develop an electronic registry system for trained technicians to register their training and technical capacity.	13,120	6,560
<i>Support to the refrigerant recovery, recycling, and reclamation (RRR) network (US \$93,080)</i>		
Upgrade an existing refrigerant recovery and recycling centre in a training institute to an RRR centre through the design, purchase, and	80,580	56,070

⁵ Each centre would receive two R-290 AC training units, R-600a domestic refrigeration units, R-290 medium temperature commercial refrigeration units, and R-290 low temperature commercial refrigeration units. One centre would also receive a small CO₂ heat pump training module.

Activity	Cost (US \$)	
	Stage III	First tranche
installation of equipment and tools; ⁶ provide equipment to two support centres (for refrigerant collection) for use by specialized technicians (technical brigades); ⁷ and provide training to technicians and technical brigades on the management of RRR equipment.		
Create an electronic database system to control recovery and recycling activities, carry out a study on refrigerant and market to develop a business model for sustainable recovery of refrigerants (mainly HCFC-22), and promote activities through a public awareness campaign.	12,500	5,000
<i>Awareness-raising (US \$53,300)</i>		
Design and carry out an awareness campaign targeting technicians, stakeholders, end users and the public on new regulatory measures, HCFC prohibitions, phase-out obligations, alternative technologies, and energy efficiency.	26,000	10,465
Hold four information workshops for RAC sector end users on the HCFC phase-out.	27,300	8,190
<i>Project management (US \$60,100)</i>		
Project coordination and monitoring activities (see paragraph 28).	60,100	20,434
Total	520,000	258,689

Project implementation and monitoring

28. The system established under stages I and II of the HPMP will continue into stage III, with the national ozone unit (NOU) and UNDP monitoring activities, reporting on progress, and working with stakeholders to phase out HCFCs. The cost of those activities amounts to US \$60,100 for UNDP, including consultants (US \$55,188), meetings and reporting (US \$3,500), and monitoring travel (US \$3,412).

Total cost of stage III of the HCFC phase-out management plan

29. The total cost of stage III of the HPMP for Angola has been estimated at US \$520,000 (plus agency support costs), as originally submitted, for achieving a 100 per cent reduction by 2030. The proposed activities and cost breakdown are summarized in table 4 above.

Implementation plan for the first tranche of stage III of the HCFC phase-out management plan

30. The first funding tranche of stage III of the HPMP in the total amount of US \$258,689 will be implemented from January 2026 to June 2028. Detailed information on the activities included in the first tranche is presented in table 5 below.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

31. The Secretariat reviewed stage III of the HPMP in light of stages I and II, the policies and guidelines of the Multilateral Fund, including the criteria for funding HCFC phase-out in the consumption sector for stage II of HPMPs (decisions 74/50 and 90/31), and the 2025–2027 business plan of the Multilateral Fund.

⁶ Including storage tanks, scale, recovery equipment, refrigerant identifier, A1/A2L and A2/A3 leak detectors, manifolds, vacuum pumps, cylinder cleaning equipment, basic tools, and safety protection. The purchase of a reclamation machine under stage II of the HPMP is in progress.

⁷ Including recovery cylinders, flaring and swaging tools, leak detector, manifolds and hoses, multimeter, welding set, scale, vacuum pump and gauge, basic tools and a toolbox, and safety protection.

Overarching strategy

32. The Government of Angola proposes to achieve a 100 per cent reduction of its HCFC baseline consumption by 2030 and to maintain a maximum annual consumption of HCFCs between 2030 and 2040 at a level consistent with Article 5, paragraph 8 ter (e)(i) of the Montreal Protocol.⁸ Planned regulatory measures include the strict import control of HCFC-22 through the licensing and quota system; the enforcement of an import ban on HCFC-141b for all uses; the prohibition of imports of HCFC-based RAC equipment; and the strengthening of the RRR system while promoting the use of recycled refrigerants.

33. In line with decision 86/51, to allow for consideration of the final tranche of its HPMP, the Government of Angola agreed to submit a detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption is in compliance with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the period 2030–2040, and the expected annual HCFC consumption in Angola for the period 2030–2040.

Legal framework

34. As discussed in paragraph 12, the regulatory measures for banning imports of HCFC-141b for flushing and HCFC-based equipment will be established during the first tranche of stage III of the HPMP. Activities and funding have been planned to support the development of these legal measures. The Secretariat advised the Government of Angola that one major HCFC-141b producer will stop production of HCFC-141b in 2026 and encouraged the Government to establish the ban on the import of HCFC-141b as planned. To ensure the timely phase-out of HCFC-141b used in flushing refrigeration circuits, it was agreed that the approval of the second tranche of stage III of the HPMP will be conditional to the establishment of the HCFC-141b import ban by the end of 2026.

Technical and cost-related issues

35. Angola has made efforts under stages I and II of the HPMP to train technicians and strengthen their capacity to adopt low-GWP alternatives. However, the country has not yet implemented a technician certification system. Stage III of the HPMP includes the development of an electronic registry system that will allow trained technicians to record their training and technical qualifications. This system is designed to capture all relevant details of each technician's capacity, including the type and level of training received, the number of services performed on medium- and large-scale equipment installations, the quantity of refrigerant recovered, and contact information to facilitate access by end users. UNDP indicated that the technician certification planned under the KIP will cover skills for servicing both HFC and HCFC equipment. The registry will also serve to document each technician's certification level, thereby supporting the broader certification framework once it is finalized and operational. Stage I of the KIP also includes the development of a labour competency standard for RAC technicians, based on the HPMP technician training curriculum, as discussed in paragraph 86.

Total project cost

36. The total cost for stage III of the HPMP amounts to US \$520,000, based on decision 74/50(c)(xii) on the eligible funding level for a low-volume-consuming country. The funding for the first tranche was agreed as submitted.

⁸ HCFC consumption may exceed zero in any year so long as the sum of its calculated levels of consumption over the ten-year period from 1 January 2030 to 1 January 2040, divided by 10, does not exceed 2.5 per cent of the HCFC baseline.

37. The second tranche of the HPMP was initially proposed in 2028 and the third (and final) tranche in 2029. However, considering the time required to implement the second tranche and in line with decision 62/17, it was agreed that the final tranche will be moved to 2030.

Agreed implementation plan for the first tranche of stage III of the HCFC phase-out management plan

38. The implementation plan for the first tranche was agreed as submitted and is presented in table 5.

Table 5. Implementation plan for the first tranche of stage III of the HPMP for Angola as agreed

Activity	Cost (US \$)
<i>Strengthening the regulatory framework (US \$30,750)</i>	
Review and update the regulatory framework to support the complete phase-out of HCFCs and strengthen the licensing and quota system for HCFC import controls.	18,000
Form a steering committee and coordinate with key stakeholders to establish bans on the import of HCFC-141b and HCFC-based RAC equipment.	12,750
<i>Customs capacity-building (US \$35,700)</i>	
Update the border control handbook to include HCFCs; hold two workshops to train 40 customs officers on trade control, identifying new substances, and prevention of illegal trade; hold two workshops to train 40 brokers and importers on HCFC regulations and compliance with the Montreal Protocol.	35,700
<i>RAC technician capacity-building (US \$92,080)</i>	
Equip four RAC training centres with training equipment for hydrocarbon-based systems.	85,520
Begin development of the electronic registry system for trained technicians to register their training and technical capacity.	6,560
<i>Support to the refrigerant recovery, recycling, and reclamation (RRR) network (US \$61,070)</i>	
Upgrade an existing refrigerant recovery and recycling centre in a training institute to an RRR centre through the design, purchase, and installation of equipment and tools; provide equipment to one support centre for use by technical brigades; and provide one training course to the technical brigades on recovery and recycling.	56,070
Begin design of the electronic database system to control recovery and recycling activities and promotion of activities through a public awareness campaign.	5,000
<i>Awareness-raising (US \$18,655)</i>	
Design and begin implementing an awareness campaign targeting technicians, stakeholders, end users and the public on new regulatory measures, HCFC prohibitions, phase-out obligations, alternative technologies, and energy efficiency.	10,465
Hold one information workshop for RAC sector end users on the HCFC phase-out and the promotion of alternative technologies.	8,190
<i>Project management (US \$20,434)</i>	
Project coordination and monitoring activities, including US \$18,084 for consultants, US \$1,167 for meetings and reporting, and US \$1,183 for monitoring travel.	20,434
Total	258,689

Co-financing

39. The Government of Angola will provide co-financing for stage III of the HPMP through the provision of technical expertise and logistical resources for the development of programmes and initiatives. In addition, the Government will provide office premises, storage facilities, communication and internet services, and administrative support as an in-kind contribution. Furthermore, the Government will facilitate the implementation of awareness-raising activities under the project by utilizing all available communication channels.

2025–2027 draft business plan of the Multilateral Fund

40. UNDP is requesting US \$520,000, plus agency support costs, for the implementation of stage III of the HPMP for Angola. The total requested value of US \$276,797, including agency support costs, for the period of 2025–2027 is US \$243,203 below the amount in the business plan.

Gender policy implementation

41. The Government of Angola and UNDP, under stage II of the HPMP, incorporated considerations and disaggregated data for the participation of women in the RAC sector and have been developing innovative approaches for their engagement in the sector, with an increase in female technicians trained under stage II and women comprising over half of the NOU team. Similar considerations will continue to be incorporated under stage III. An assessment was conducted during preparation of the HPMP, and stage III aims to increase the number of female RAC technicians to at least 2,000. This reflects a broader commitment to capacity-building, equitable access to vocational training, and the promotion of women in technical fields. The NOU will monitor, inform, and raise awareness among women by continuing to collect and report disaggregated data, introducing respective language in its communications, and incorporating aspects that could be attractive to women when recruiting new consultants and NOU staff.

Sustainability of the HCFC phase-out and assessment of risks

42. The country has developed local expertise to control HCFC imports within customs and monitor the HPMP implementation in the provincial offices of the Ministry of Environment. Montreal Protocol related matters have been included in the training curriculum for customs officers, and the training curriculum is reviewed regularly to incorporate new requirements into the training manual. The recommendations from the verification report will be implemented during stage III of the HPMP. RAC training institutions will be further strengthened to include the safe handling of flammable and high-pressure refrigerants as part of their regular courses, and one RRR centre and two support centres will be established to reduce the use of new refrigerants in equipment operating past 2030. All these measures will contribute to the sustainability of the HCFC phase-out and strengthened relevant capacity in the country.

43. The major identified risks include the potential illegal trade resulting from the reduced supply and complete phase-out of HCFCs. This risk will be addressed through awareness-raising activities, training, and regulatory measures, as well as technical assistance to disseminate low-GWP alternatives to promote a gradual and well managed transition to HCFC alternatives. A further risk relates to the limited national capacity of the NOU and other relevant entities responsible for monitoring the trade of HCFCs. This will be mitigated through extensive training of customs officers, importers and brokers under the HPMP, ensuring that the quotas are issued, updated and enforced. Other risks include health and safety related risks from the potential adoption of flammable and high-pressure refrigerants. This will be addressed through proper training and a possible future certification scheme to be implemented under the KIP, awareness-raising, and personal safety measures to be provided to the technicians in their workstations or facilities. Lack of coordination among policymakers in the areas of ODS and energy efficiency related areas may delay the development of effective synergies. This is particularly related to the adoption of energy-efficient, commercially driven alternative technologies in the RAC sector through strengthened coordination among key policymakers. This is addressed through the promotion of teamwork with different stakeholders throughout coordination.

Impact on the climate

44. The activities proposed in the servicing sector, which include better refrigerant containment through training and provision of equipment, will reduce the use of HCFC-22 in servicing. Each kilogram of HCFC-22 not emitted due to better refrigeration practices results in the savings of approximately

1.8 CO₂-equivalent tonnes. A calculation of the impact on the climate was provided in the HPMP. The activities planned by Angola, including its efforts to promote low-GWP alternatives, as well as refrigerant RRR, indicate that the implementation of the HPMP will reduce the emission of refrigerants into the atmosphere, resulting in climate benefits.

Draft Agreement

45. A draft Agreement between the Government of Angola and the Executive Committee for stage III of the HPMP is contained in annex I to the present document.

RECOMMENDATION

46. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage III of the HCFC phase-out management plan (HPMP) for Angola for the period from 2025 to 2030 for the complete phase-out of HCFC consumption, in the amount of US \$520,000, plus agency support costs of US \$36,400, for UNDP, on the understanding that no more funding from the Multilateral Fund will be provided for the phase-out of HCFCs;
- (b) Noting the commitment of the Government of Angola to completely phase out HCFCs by 1 January 2030, and that HCFCs will not be imported after that date, except for those allowed for a servicing tail between 2030 and 2040, where required, consistent with the provisions of the Montreal Protocol;
- (c) Further noting the commitment of the Government of Angola to establish a ban on the import of HCFC-based equipment by December 2027;
- (d) Deducting 5.18 ODP tonnes of HCFCs from the remaining HCFC consumption eligible for funding;
- (e) Approving the draft Agreement between the Government of Angola and the Executive Committee for the reduction in consumption of HCFCs, in accordance with stage III of the HPMP, contained in annex I to the present document;
- (f) That the approval of the second tranche of stage III of the HPMP would be conditional to the establishment of a ban on the import of HCFC-141b by December 2026;
- (g) That, to allow for consideration of the final tranche of its HPMP, the Government of Angola should submit:
 - (i) A detailed description of the regulatory and policy framework in place to implement measures to ensure that HCFC consumption was in compliance with paragraph 8 ter(e)(i) of Article 5 of the Montreal Protocol for the period 2030–2040;
 - (ii) The expected annual HCFC consumption in Angola for the period 2030–2040; and
- (h) Approving the first tranche of stage III of the HPMP for Angola, and the corresponding tranche implementation plan, in the amount of US \$258,689, plus agency support costs of US \$18,108, for UNDP.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Angola

PROJECT TITLE	AGENCY
Kigali HFC implementation plan (stage I)	UNDP (lead)

LATEST ARTICLE 7 DATA (Annex F)	Year: 2024	1,722.96 mt	3,877,981 CO ₂ -eq tonnes
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SECTORAL HFC CONSUMPTION DATA (CO ₂ -eq tonnes) AND ACTIVITIES									
	Aerosol	Foam	Fire-fighting	Air-conditioning and refrigeration				Solvent	Other
				Manufacturing			Servicing		
				Refrigeration	AC	Other			
Latest CP report (2024)							3,877,981		
KIP stage I activities as agreed (Y/N)							Y		

AVERAGE 2020–2022 HFC CONSUMPTION IN SERVICING	1,515.99 mt	3,536,815 CO ₂ -eq tonnes
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BASELINE CONSUMPTION DATA (CO ₂ -eq tonnes)	2020	2021	2022	Average 2020-2022
HFC annual consumption	3,812,357	757,864	6,040,225	3,536,815
HCFC baseline (65%)				341,185
HFC baseline				3,878,000

HFC CONSUMPTION ELIGIBLE FOR FUNDING (CO ₂ -eq tonnes)	
Starting point for sustained aggregate reductions	TBD
Previously approved HFC phase-down investment projects	No
Aggregate reductions from previously approved projects	0

PROJECT DATA AS AGREED			2025*	2026-2027	2028	2029	2030	Total
Consumption (CO ₂ -eq tonnes)	Montreal Protocol limits		3,878,000	3,878,000	3,878,000	3,490,200	3,490,200	n/a
	Maximum allowable		3,878,000	3,878,000	3,878,000	3,490,200	3,490,200	n/a
	Reduction from baseline (%)		0	0	0	10	10	n/a
Amounts recommended in principle (US \$)	UNDP	Project costs	385,563	0	399,058	0	139,415	924,036
		Support costs	26,989	0	27,934	0	9,759	64,682
	Total project costs		385,563	0	399,058	0	139,415	924,036
	Total support costs		26,989	0	27,934	0	9,759	64,682
	Total funds		412,552	0	426,992	0	149,174	988,718

* Recommended for approval at the present meeting

Reduction from remaining consumption eligible for funding in stage I (CO ₂ -eq tonnes)	387,800
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Secretariat's recommendation	Individual consideration
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PROJECT DESCRIPTION

47. The present document contains the following sections:

- I. Summary of the proposal as submitted
- II. Background: Status of implementation of the HCFC phase-out management plan and previous HFC-related activities
- III. HFC consumption overview: HFC consumption levels, trends, and consumption by sector
- IV. Stage I of the Kigali HFC implementation plan, as submitted: Regulatory framework, phase-down strategy, total stage cost, and implementation plan for the first tranche
- V. Secretariat's comments, including the agreed cost of activities
- VI. Recommendation

I. Summary of the proposal as submitted

48. On behalf of the Government of Angola, UNDP as the designated implementing agency has submitted a request for stage I of the Kigali HFC implementation plan (KIP), in the amount of US \$924,031, plus agency support costs of US \$64,682, as originally submitted.⁹

49. The implementation of stage I of the KIP will assist the Government of Angola in meeting the target of 10 per cent reduction from its HFC baseline consumption by 1 January 2029.

50. The first tranche of stage I of the KIP being requested at this meeting amounts to US \$385,558, plus agency support costs of US \$26,989 for UNDP, as originally submitted, for the period of December 2025 to December 2028.

II. Background

Status of implementation of the HCFC phase-out management plan

51. Table 6 presents information on the HCFC phase-out management plan (HPMP) in Angola as of October 2025.

Table 6. HPMP implementation status for Angola

	Stage I	Stage II
Meetings when HPMP was approved/updated	65 th /75 th	79 th
Reduction from baseline	10% by 2015	67.5% by 2025
Total stage cost (US \$)	176,000	904,000
Date of completion (actual/planned)	31 December 2017	31 December 2026

Status of implementation of previous HFC-related activities

52. Table 7 presents an overview of activities implemented in Angola in the context of the Kigali Amendment that have been funded by the Multilateral Fund.

⁹ As per the letter of 10 September 2025 from the Ministry of the Environment of Angola to UNDP.

Table 7. Previously approved HFC-related activities in Angola

Approval meeting	Project title	Implementing agency	Cost (US \$)	Date of completion
80 th	Enabling activities for HFC phase-down	UNEP	150,000	December 2021

III. HFC consumption overview

HFC consumption levels

53. Angola only imports HFCs for use in the refrigeration and air-conditioning (RAC) servicing sector. The most consumed substances in 2024 were R-404A (28.7 per cent of total HFC consumption in CO₂-equivalent (CO₂-eq) tonnes), R-507A (21.6 per cent), R-407C (19.0 per cent), HFC-134a (15.6 per cent), and other HFCs (15.0 per cent). Table 8 presents the country's HFC consumption as reported to the Ozone Secretariat under Article 7 of the Montreal Protocol and the country's HFC baseline.

Table 8. HFC consumption (2020–2024 Article 7 data) and baseline in Angola

HFC	GWP	2020	2021	2022	2023	2024
Metric tonnes (mt)						
HFC-32	675	4.56	5.30	110.83	180.03	162.00
HFC-125	3,500	3.35	0.00	7.02	0.00	0.00
HFC-134a	1,430	727.86	184.89	831.53	1,402.32	423.96
R-404A	3,922	511.36	84.74	557.56	853.17	284.00
R-407C	1,774	36.80	24.06	407.92	1,967.62	416.00
R-410A	2,088	276.11	48.36	488.40	1,204.76	227.00
R-507A	3,985	27.53	3.50	206.30	436.76	210.00
Total (mt)		1,587.57	350.85	2,609.56	6,044.65	1,722.96
CO₂-eq tonnes						
HFC-32	675	3,078	3,578	74,810	121,520	109,350
HFC-125	3,500	11,725	0	24,570	0	0
HFC-134a	1,430	1,040,840	264,393	1,189,088	2,005,318	606,263
R-404A	3,922	2,005,349	332,316	2,186,527	3,345,793	1,113,734
R-407C	1,774	65,278	42,679	723,589	3,490,256	737,922
R-410A	2,088	576,380	100,952	1,019,535	2,514,937	473,863
R-507A	3,985	109,707	13,948	822,106	1,740,473	836,850
Total (CO₂-eq tonnes)		3,812,357	757,864	6,040,225	13,218,297	3,877,981
HFC baseline calculation (CO₂-eq tonnes)						
HFC average consumption in 2020–2022					3,536,815	
HCFC baseline (65%)					341,185	
HFC baseline					3,878,000	

Country programme implementation report

54. The sectoral HFC consumption data provided by the Government of Angola in its country programme (CP) implementation report for 2024 does not include an export of HFC-134a that was reported under Article 7 of the Montreal Protocol. Further discrepancies exist between the CP and Article 7 data for 2022 and 2023. UNDP confirmed that the data reported under Article 7 is correct; the Government had submitted revised CP data, accordingly.

HFC consumption trends

55. HFC consumption decreased substantially in 2021 due to restrictions enacted during the COVID-19 pandemic, followed by a substantial increase in 2022 given the COVID-19 recovery and increased demand for HFC imports to service additional RAC equipment. Consumption in 2023 increased further likely due to stockpiling by importers in advance of the 2024 consumption freeze.

HFC consumption by sector

56. HFCs are mainly consumed for servicing in industrial refrigeration (30.6 per cent in mt and 45.3 per cent in CO₂-eq tonnes), followed by residential air-conditioning (AC) (18.1 per cent in mt and 14.8 per cent in CO₂-eq tonnes), commercial AC (12.8 per cent in mt and 9.9 per cent in CO₂-eq tonnes), transport refrigeration (12.5 per cent in mt and 14.1 per cent in CO₂-eq tonnes), and other subsectors, as shown in tables 9 and 10. A small amount of HFCs are also imported intermittently to service firefighting equipment.

Table 9. Average 2020-2022 HFC consumption in Angola in the refrigeration and AC servicing subsectors in metric tonnes

Sector	HFC-134a	HFC-32	R-410A	R-407C	R-404A	R-507A	Total	Share of total (%)
Refrigeration servicing subsectors								
Domestic	76.80	0.00	0.00	0.00	0.00	0.00	76.80	5.1
Commercial	137.36	0.00	0.00	0.00	0.00	0.00	137.36	9.1
Industrial	90.22	0.00	0.00	0.00	293.90	79.11	463.23	30.6
Transport	98.76	0.00	0.00	0.00	90.65	0.00	189.41	12.5
Air-conditioning servicing subsectors								
Residential	0.00	36.80	237.68	0.00	0.00	0.00	274.48	18.1
Commercial	0.00	3.42	33.28	156.26	0.00	0.00	192.96	12.8
Mobile	178.28	0.00	0.00	0.00	0.00	0.00	178.28	11.8
Total	581.43	40.23	270.96	156.26	384.55	79.11	1,512.54	100

Table 10. Average 2020-2022 HFC consumption in Angola in the refrigeration and AC servicing subsectors in CO₂-eq tonnes

Sector	HFC-134a	HFC-32	R-410A	R-407C	R-404A	R-507A	Total	Share of total (%)
Refrigeration servicing subsectors								
Domestic	109,825	0	0	0	0	0	109,825	3.1
Commercial	196,426	0	0	0	0	0	196,426	5.6
Industrial	129,016	0	0	0	1,152,571	315,253	1,596,841	45.3
Transport	141,228	0	0	0	355,493	0	496,721	14.1
Air-conditioning servicing subsectors								
Residential	0	24,843	496,155	0	0	0	520,999	14.8
Commercial	0	2,312	69,467	277,182	0	0	348,960	9.9
Mobile	254,944	0	0	0	0	0	254,944	7.2
Total	831,440	27,155	565,622	277,182	1,508,064	315,253	3,524,717	100

Refrigeration and air-conditioning servicing sector

57. There are approximately 19,500 RAC technicians (600 women) and 1,870 RAC workshops consuming HFCs for servicing in Angola. The country has 19 public training centres equipped with RAC training modules and one recycling and recovery training laboratory; the establishment of a reclamation centre is planned under the HPMP. A total 1,280 technicians have been trained under stages I and II of the HPMP. The country does not yet have a technician certification scheme in place.

Domestic, commercial, industrial and transport refrigeration servicing

58. The domestic refrigeration subsector is moving towards R-600a (isobutane) as a refrigerant, which is used in approximately 43 per cent of units. The remaining 57 per cent of domestic units use HFC-134a; while this HFC is largely consumed for older equipment, there is resistance to move towards hydrocarbons due to a lack of knowledge in good and safe servicing practices for hydrocarbon-based equipment.

59. The commercial refrigeration subsector is a large consumer of HFCs, comprising stand-alone refrigeration and centralized systems. The high cost and low availability of lower global-warming potential (GWP) alternative refrigerants pose a challenge for phasing down HFCs in this subsector.

60. HFCs in the industrial refrigeration subsector are mainly consumed in mining and oil production, followed by food management. In mining and oil production, the large refrigeration and condensing systems require high pressure and low temperatures, presenting a challenge for the conversion to HFC alternatives and other fluorinated refrigerants. Food management mainly consists of smaller centralized systems for storage and handling zones; in larger facilities such as meat processing plants, ammonia has consistently been the principal refrigerant for several years.

61. The refrigerated transport subsector comprises approximately 125,000 trucks consuming R-404A and HFC-134a, transporting refrigerated goods as part of the cold chain for the local and export market.

Residential and commercial air-conditioning servicing

62. Use of HFCs in the residential AC subsector has significantly increased in recent years, owing to the increased availability of mini-split and portable AC units and increase of home offices following the COVID-19 pandemic. Of the 8,177,778 homes in Angola, there are estimated 8,303,000 R-410A-based units and 437,000 HFC-32-based units.

63. R-407C is the dominant refrigerant in the commercial AC subsector, followed by R-410A and HFC-32. It is one of the largest subsectors in the country, consuming HFCs for new constructions, public services, financial institutions, communication, supermarkets and public entities. Suitable solutions for alternative technologies need to be developed in this subsector to transition away from HFCs.

Mobile air-conditioning servicing

64. Angola has an estimated 2,550 mobile air-conditioning (MAC) technicians and 200 MAC servicing workshops consuming HFCs; 60 per cent (1,530) of MAC technicians work out of service shops and the remaining are independent.

65. Approximately 90 per cent of motor vehicles use HFC-134a-based AC. The remaining 10 per cent of vehicles either do not have AC or use the alternative HFO-1234yf, which is found only in newer luxury vehicles. As in domestic refrigeration, there is a need for good and safe servicing practices in this subsector to prevent technicians using HFCs in HFO-based systems. It is predicted that HFC-134a will continue to prevail in MAC for the next 30 years, highlighting the need for good practices in refrigerant recovery, recycling/reuse, and reclamation.

Local installation and assembly subsector

66. The installation and assembly subsector in Angola is widespread and demands a range of specialized skills, with equipment ranging from small-scale domestic units to larger industrial installations. An assessment on estimating data in this subsector has not yet been carried out.

Firefighting sector

67. Consumption of HFCs in the firefighting sector is very low, with small amounts of HFC-125 imported intermittently for servicing equipment.

IV. Stage I of the Kigali HFC implementation plan as submitted

Institutional, policy and regulatory framework

68. The Ministry of Environment is the national body responsible for the implementation of the Montreal Protocol in Angola, under which the national ozone unit (NOU) was established to coordinate activities. The institutional infrastructure established to facilitate the implementation of the Montreal Protocol is composed of the National Institute of Environment Management and NOU, supported by the Multilateral Fund and partners from other Government offices, the private sector, and academia. The NOU coordinates closely with the Climate Change Direction of the Ministry of Environment.

69. The Government of Angola ratified the Kigali Amendment on 16 November 2020. Regulations were established through Presidential Decree No. 153/2011 to regulate the import and export of ODS, including HCFCs and HCFC-based equipment. The regulations also include a quota system to control the import of HCFCs and HCFC-based/containing equipment, and the HCFC licensing system has been operational since 2013. The Ministry of Commerce issues import licences in consultation with the Ministry of Environment. The licensing system for HFCs and HFC blends has been in place since January 2024; the HFC quota system has also been in place since 2024 and is administered by the NOU. Quotas are allocated to enterprises and registered in customs in metric tonnes, and the NOU manages the quotas converted to CO₂-eq tonnes. There is currently no licensing or quota system for managing the export of HFCs.

Phase-down strategy for stage I of the Kigali HFC implementation plan

Overarching strategy

70. As submitted, stage I proposes to eliminate 387,800 CO₂-eq tonnes of HFCs, reducing the country's consumption by 10 per cent of the established baseline.

Proposed reductions

71. In UNDP's business-as-usual forecast, shown in table 11, the country's HFC consumption increases at an annual rate between 3.0 and 6.2 per cent, where that variability is driven inter alia by decreased consumption of HFC-134a with the increased market uptake of R-600a-based domestic refrigerators counterbalanced with slowly increasing consumption in MAC; increased consumption of HFC-32 and decreasing growth in R-410A with increased demand for HFC-32-based AC; and continued growth in commercial refrigeration and AC leading to increases in R-404A and R-507A, and R-407C, respectively.

Table 11. HFC consumption forecast under the unconstrained scenario, Montreal Protocol limits, and proposed HFC reductions under stage I (CO₂-eq tonnes)

	2025	2026	2027	2028	2029
HFC consumption forecast*	4,119,852	4,345,358	4,551,776	4,688,925	4,845,679
Montreal Protocol HFC consumption limits	3,878,000	3,878,000	3,878,000	3,878,000	3,490,200
HFC consumption levels proposed under the KIP	3,878,000	3,878,000	3,878,000	3,878,000	3,490,200
Proposed reductions from the HFC consumption baseline (%)	0	0	0	0	10

* Calculated based on an annual growth rate that varies between 3.0 and 6.2 per cent.

Proposed activities

72. Activities in the servicing sector proposed for implementation under stage I and the first tranche and their cost breakdown are presented in table 12.

Table 12. Servicing sector activities and their costs in stage I and the first tranche of the KIP for Angola as submitted

Activity	Cost (US \$)	
	Stage I	First tranche
<i>Strengthening the regulatory framework (US \$100,000)</i>		
Update the regulatory framework to support the phase-out of HFCs and HFC-based equipment: Assess current policies (consultations with national experts and other stakeholders, impact assessments); formulate and adopt the new measures; and disseminate information to stakeholders.	25,000	12,500
Create a national registry of medium and large end users of HFC-based equipment (includes stakeholder consultations, workshops, and meetings), to be operational in 2027 and fully implemented by December 2028.	25,000	12,500
Strengthen the national capacity to formulate, adapt, and update the policy and regulatory framework, including codes and standards for HFC control.	25,000	12,500
Study on the economic impact of an accelerated conversion of RAC equipment, particularly in the public finance sector including on subsidies, taxations, and employment growth.	25,000	12,500
<i>Customs capacity-building for HFC control (US \$183,330)</i>		
Procure and provide main customs ports with six wide-range refrigerant identifiers.	36,000	36,000
Update the border control handbook to include the last amendment to the Harmonized System (HS) codes for HFCs; update the customs training programme including on using new refrigerant identifiers, trade control, identifying new substances, and prevention of illegal trade; update the licensing and quota system to be based on CO ₂ -eq tonnes and to include exports; and update HS codes and other policies as necessary.	17,330	8,665
Engage international consultants to support the design and implementation of customs capacity-building activities, including on updates to the licensing and quota system and customs training.	30,000	10,000
Upgrade the central customs laboratory with refrigerant identification laboratory equipment ¹⁰ to identify HFCs and prevent illegal trade (procurement, installation, and training).	100,000	0
<i>RAC technician capacity-building (US \$253,905)</i>		
Provide 75 sets of tools to technicians for hydrocarbon-based RAC systems (vacuum pump, manifold, hoses, load scale, leak detector, and vacuum gauge).	125,025	62,513
Develop a labour competency standard for RAC technicians based on the HPMP technician training course, including good servicing practices, leak prevention, safe handling of flammable and high-pressure refrigerants, and new design of RAC systems.	23,880	11,940
Hold 30 workshops to train at least 600 technicians in good servicing practices, leak prevention, safe handling of flammable and high-pressure refrigerants, including at least three workshops on CO ₂ .	105,000	17,500
<i>Mobile air-conditioning (US \$310,500)</i>		
Identify and register the approximately 200 MAC high-service volume servicing workshops in the country.	15,000	7,500
Develop and print a training guide and a poster on good MAC servicing practices.	8,000	8,000
Hold 24 workshops to train 500 technicians in good servicing practices for MAC, and one workshop to train 12 trainers.	87,500	17,500
Procure 28 automotive recovery systems for technicians.	140,000	70,000

¹⁰ Including a gas chromatograph, organic compound detector, molecular analysis system, gas chromatography columns, calibration gases, collection materials, analytical software, leak detector, and safety equipment and ventilation.

Activity	Cost (US \$)	
	Stage I	First tranche
Procure four sets of recovery and recycling training equipment for each of the three MAC training centres (12 total).	60,000	60,000
<i>Project management</i>		
Project coordination and monitoring activities (see paragraph 73)	76,296	25,940
Total	924,031	385,558

Project implementation, coordination and monitoring

73. The NOU and UNDP will support the Government in the coordination, management, monitoring, and reporting of all KIP activities. The cost for those activities amounts to \$76,296 for UNDP and includes a national consultant (US \$41,963); an international consultant (US \$25,559); coordination meetings and reporting (US \$3,500); and monitoring travel (US \$5,274).

Total cost of stage I of the Kigali HFC implementation plan

74. The budget for stage I has been proposed at US \$924,031. The costs of activities in the refrigeration servicing sector have been proposed in line with decision 92/37. The proposed activities and cost of stage I of the KIP are summarized in table 12 above.

Implementation plan for the first tranche

75. The first funding tranche of stage I of the KIP was submitted at a total amount of US \$385,558, as shown in table 12 above, to be implemented between December 2025 and December 2028. Detailed information on the activities to be implemented under the first tranche, including adjustments and level of funds agreed, are presented in paragraph 93 below.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

V. Comments

HFC consumption

76. The Secretariat sought to better understand the reasons for the fluctuations in HFC consumption in the 2020-2024 period, and why the growth in HFC consumption in the baseline years relative to HCFC consumption in 2009-2010 was so much higher than in other countries in the region. Regarding the former, UNDP noted that the growth in HFC consumption in the 2020-2023 period was substantially above the country's gross domestic product growth, and suggested that population growth, increased dependence on HFCs in cold chains and AC, and the phase-in of HFCs with the phase-out of HCFCs and CFC-based equipment contributed to the observed growth. Noting the substantial decline in consumption in 2024, the Secretariat considers it likely that stockpiling contributed significantly to the 2023 consumption.

77. Regarding the latter, UNDP suggested that the higher growth in HFC consumption relative to HCFC consumption in the respective baseline years than other countries in the region was because Angola's economy had grown at a higher rate than other countries in the region, driven in part by significant growth in the oil and gas sector. The Secretariat noted that other countries in the region had since 2010 experienced higher economic growth than Angola but had nonetheless experienced lower growth in HFC consumption relative to their HCFC consumption in the 2009-2010 period.

78. In response to a question on the basis of which reporting was done, UNDP confirmed that the country's reporting reflected imports (and exports) and clarified that while verifying the country's HCFC consumption (see paragraph 5 of the present document), the verifier also had access to information on the

country's HFC imports for 2020-2022. Thus, while UNDP was not clear why the growth in HFC consumption relative to HCFC consumption in Angola appeared to be so much higher than for other countries in the region, the verifier's examination of information gave UNDP a high degree of confidence in the accuracy of the reported HFC consumption for those years. As the verifier had not assessed the 2023 HFC consumption, it was agreed to invite the country, if it so wished, to include 2023 in the verification of consumption that will be undertaken for the submission of the second tranche of the KIP. Such a verification could give confidence in the reported data and allow the Government to better understand the country's market needs.

Overarching strategy

79. The Secretariat inquired whether the country had considered proposing targets lower than those specified under the Montreal Protocol control schedule. Further to a discussion with UNDP and noting the considerable fluctuations in consumption in the 2020-2024 period, the Secretariat considered it prudent that the country chose to retain the targets as originally proposed.

Institutional, policy and regulatory framework

HFC licensing and quota system

80. The rapid growth of HFCs relative to HCFCs and considerable fluctuations in consumption in the 2020-2024 period, combined with the unusual export of HFCs in 2024, reinforce the merit of including in stage I of the KIP a focus on strengthening the country's licensing and quota system. UNDP confirmed that 2024 was the first time that Angola recorded exports of controlled substances. While that small export enabled the country's consumption to remain below the country's Montreal Protocol control target for that year, it also highlighted the need to develop a comprehensive licensing and quota system that addressed both imports and exports. More broadly, in 2024 quotas and licences were issued in metric tonnes on a first-come, first-served basis, where each quota and licence was by substance. This system makes ensuring that the country's consumption remains below the Montreal Protocol control targets more cumbersome and challenging to manage than one based on CO₂-eq tonnes and does not provide importers flexibility to import lower-GWP HFCs.

81. Accordingly, UNDP had assisted the country to in 2025 revise its licensing and quota system to be based on CO₂-eq tonnes. In addition, in 2024 quotas were allocated based on historic import records by substance, with the HCFC component of the baseline provided as needed to the quota distributed per importer. With UNDP's assistance, that quota system has been revised to include a 10 per cent reserve for emergencies or unforeseen circumstances and to allow for new importers.

82. In line with decision 87/50(g), UNDP has confirmed that Angola has an established and enforceable system of licensing and quotas for monitoring HFC imports in place; as reflected in paragraph 85 below, UNDP will assist the country to develop a licensing and quota system for exports and to further strengthen its import licensing and quota system. The country has already issued HFC import quotas for 2025 at 3,878,000 CO₂-eq tonnes, in line with the Montreal Protocol control targets.

83. The Secretariat enquired about the feasibility of imposing a ban on the import of HFC-based domestic refrigerators and stand-alone commercial refrigerators, considering the wide availability of appliances charged with R-600a and R-290 and the example of other countries in the region. UNDP confirmed that Angola will develop and enforce such a ban by 1 January 2029. It was agreed that the proposed study on the impact on the economy of an accelerated process of RAC equipment conversion, and the update to the regulatory framework to support the phase-out of HFCs and HFC-based equipment, will include activities to support the development and implementation of the ban.

84. The Secretariat noted from the progress report on the implementation of the institutional strengthening (IS) phase VII project that 320 counterfeit refrigerant cylinders were seized in 2024. UNEP clarified that those cylinders were intercepted during routine inspections supported by the trained customs officers and laboratories equipped for refrigerant identification; the cylinders had been falsely labeled as HCFC-22, but testing revealed that they contained a mixture of hydrocarbons and other unidentified substances. Following national enforcement procedures, the cylinders were confiscated and transferred for safe disposal in compliance with environmental regulations. Those seizures reinforced the value of continued training of customs officers and of strengthening the capacity of customs under the KIP.

Technical and cost-related issues

85. Of the funding requested, US \$100,000 is allocated to strengthening the HFC regulatory framework. While noting that the KIP's focus on strengthening the country's regulatory framework was strategic, the Secretariat sought to better understand how the activity to strengthen the national capacity to formulate, adapt, and update the policy and regulatory framework, including codes and standards for HFC control related to and did not duplicate the activity to update the licensing and quota system that would be undertaken under the customs capacity-building for HFC control component of the KIP, for which only limited funding was allocated. Further to a discussion with UNDP, it was agreed to integrate the two components into a single activity focused on strengthening the legal framework, including updating the licensing and quota system, implementing the HS codes, updating the customs training programme, and updating the handbook for customs operations, with a total budget of US \$42,335 that also included a small correction based on the country's maximum eligible funding in line with decisions 95/86 and 96/50(b).

86. Angola does not have a mandatory, competency-based RAC technician certification scheme. While recognizing the importance of such a scheme, UNDP did not include its development in stage I of the KIP. Rather, stage I included activities that would enable the implementation of such a scheme under stage II of the KIP. The country also does not yet have a reclamation centre. The HPMP includes the development of a reclamation centre located in a training institute, and two collection centres will support the reclamation centre by providing recovered refrigerant gas; stage III also includes a study to develop a business model for the reclamation centre. Future stages of the KIP could include further strengthening of the recovery, recycling and reclamation infrastructure.

87. Noting the importance of R-404A, R-407C and R-507A to the country's consumption, which are used in industrial refrigeration and commercial AC, and to a lesser extent in transport refrigeration, the Secretariat encouraged UNDP to prioritize the development and implementation of the registry of medium and large end users. UNDP clarified that the registry would include end users in industrial refrigeration and commercial AC; UNDP was assessing how to best also include transport refrigeration, a process that would be refined under stage I. UNDP expected that parts of the registry would be operational in 2027, with full implementation by the end of 2028. The Secretariat further noted that for larger facilities, such as meat processing plants, ammonia has remained the principal refrigerant. Technician training being undertaken under the KIP and HPMP include the safe handling of toxic refrigerants, such as ammonia; where feasible, the NOU will seek to promote this alternative.

88. Noting that small quantities of HFC-125 were imported in 2020 and 2022 to service fire protection equipment, the Secretariat inquired who is undertaking such servicing, and whether such servicing is following standards. UNDP suggested that the servicing was likely undertaken by some artisanal or non-industrial service but that given the small quantities imported, the importer had not tracked the HFC-125 through its distributors. The registry of medium and large end-users could be extended to include such end-users to help the NOU better understand this use so that it can be addressed under future stages.

89. Based on the cost of activities in the servicing sector, agreed at US \$847,740, reductions from the remaining HFC consumption eligible for funding in the servicing sector amount to 387,800 CO₂-eq tonnes,

as summarized in table 13.¹¹ Accordingly, the Government of Angola has agreed to reduce its 2029 HFC consumption to 3,490,200 CO₂-eq tonnes, representing 10 per cent of the country's HFC baseline for compliance.

Table 13. Agreed costs and reductions from HFC consumption eligible for funding and final target

Servicing sector		
Average HFC consumption in the servicing sector in baseline years	mt	1,515.99
	CO ₂ -eq tonnes	3,536,815
Average GWP of all HFCs consumed in the sector		2,333.00
Agreed funding	US \$	847,740
Agreed cost-effectiveness threshold	US \$/kg	5.10
Reductions in the servicing sector	mt	166.22
	CO ₂ -eq tonnes	387,800
Reductions from all sectors		
Established HFC consumption baseline	CO ₂ -eq tonnes	3,878,000
Reductions achieved through activities in the servicing sector	CO ₂ -eq tonnes	387,800
Target		
2029 target	CO ₂ -eq tonnes	3,490,200

Project management unit

90. Funding for the project management unit (PMU) was agreed at US \$76,296 (US \$41,963 for a national consultant, US \$25,559 for an international consultant, US \$3,500 for coordination meetings and reporting, and US \$5,274 for monitoring travel), amounting to 9.0 per cent of the project costs.

Total project cost

91. At the total cost of US \$924,036, stage I of the KIP for Angola will result in a reduction of 387,800 CO₂-eq tonnes from the country's HFC consumption eligible for funding, as summarized in paragraph 89 above.

92. Stage I of the KIP will be implemented in three tranches. Noting that the second and third and final tranches of the KIP had been planned to be submitted in 2028 and 2029, which may make it difficult for UNDP to achieve the necessary disbursement to submit the final tranche of the KIP, and noting that the final tranche of stage III of the HPMP would be submitted in 2030, it was agreed to shift the last tranche of stage I of the KIP from 2029 to 2030 to be coincident with that of the HPMP, thereby allowing the country to minimize the administrative and reporting burden associated with those submissions, on the understanding that this shift would not preclude the country from submitting its request for its stage II of the KIP in line with other Article 5 countries that submitted their final tranche in 2029.

Implementation plan for the first tranche of the Kigali HFC implementation plan

93. The implementation plan for the first tranche was agreed as submitted except for the combination of activities, and small correction based on the country's maximum eligible funding, described in paragraph 85 above, and as presented in table 14.

¹¹ Calculated in line with the methodology presented in annex I of document UNEP/OzL.Pro/ExCom/92/46.

Table 14. Activities and their costs in the first tranche of the KIP for Angola as agreed

Activity	Cost (US \$)
<i>Strengthening the regulatory framework (US \$37,500)</i>	
Update the regulatory framework to support the phase-out of HFCs and HFC-based equipment: Assess current policies (consultations with national experts and other stakeholders, impact assessments) and formulate new measures.	12,500
Design and operationalize the national registry of medium and large end users (includes stakeholder consultations, workshops, and meetings).	12,500
Begin study on the economic impact of an accelerated conversion of RAC equipment.	12,500
<i>Customs capacity-building for HFC control (US \$67,170)</i>	
Procure and provide main customs ports with six wide-range refrigerant identifiers.	36,000
Update the border control handbook to include the last amendment to the Harmonized System (HS) codes for HFCs; update the customs training programme including on using new refrigerant identifiers, trade control, identifying new substances, and prevention of illegal trade; update the licensing and quota system to be based on CO ₂ -eq tonnes and to include exports; and update HS codes.	21,170
Engage international consultants to support the design and implementation of customs capacity-building activities, including on updates to the licensing and quota system and customs training.	10,000
<i>RAC technician capacity-building (US \$91,953)</i>	
Provide 37 sets of tools to technicians for hydrocarbon-based RAC systems (vacuum pump, manifold, hoses, load scale, leak detector, and vacuum gauge).	62,513
Begin development of a labour competency standard for RAC technicians based on the HPMP technician training course, including the management of new refrigerants and new design of RAC systems.	11,940
Hold five workshops to train at least 100 technicians in hydrocarbon systems, including at least one workshop on CO ₂ .	17,500
<i>Mobile air-conditioning (US \$163,000)</i>	
Identify the approximately 200 MAC high-service volume servicing workshops in the country.	7,500
Develop and print a training guide and a poster on good MAC servicing practices.	8,000
Hold four workshops to train 80 technicians in good servicing practices for MAC, and one workshop to train 12 trainers.	17,500
Procure 14 automotive recovery systems for technicians.	70,000
Procure four sets of recovery and recycling training equipment for each of the three MAC training centres (12 total).	60,000
<i>Project management</i>	
Project coordination and monitoring activities, including a national consultant (US \$14,267); an international consultant (US \$8,690); coordination meetings and reporting (US \$1,166); and monitoring travel (US \$1,817).	25,940
Total	385,563

Co-financing

94. The Government of Angola will provide in-kind co-financing through the provision of personnel, office and storage space, communications, and administration. The Ministry of Environment and the National Directorate of Customs will support the strengthening of the regulatory framework by providing legal support on the control and reduction of HFC consumption.

2025–2027 business plan of the Multilateral Fund

95. UNDP is requesting US \$924,036, plus agency support costs, for the implementation of stage I of the KIP for Angola. The total value of US \$412,552, including agency support costs, requested for the period of 2025–2027, is US \$60,552 above the amount in the business plan.

Gender policy implementation

96. To implement the Multilateral Fund gender policy, the Government of Angola plans to launch a dedicated programme that aims to foster the participation of women in the RAC sector. The KIP includes activities aiming at increasing the participation of women, through workshops, and capacity-building of women in the RAC sector. The Government will conduct a study identifying barriers for women's participation in the sector and priority areas; implement an action plan to apply to the KIP based on the outcomes of the study; promote the participation of women in the implementation of KIP activities as well as in workshops and training activities; and appoint a specialist to assist the NOU in developing the action plan and further incorporating the engagement of women into KIP activities. Respective disaggregated data will be monitored, evaluated, and reported on.

Sustainability of the HFC phase-down and assessment of risks

97. The strengthening of the country's licensing and quota system, including by being based on CO₂-eq tonnes, setting aside 10 per cent of the quota for unforeseen circumstances and new importers, and including exports in the system, will ensure strengthened monitoring and control of HFC consumption. Corrective measures implemented by UNEP will help mitigate the risk of continued delays in the implementation of the IS project in the country, thereby helping to ensure that the NOU receives the assistance it needs to collect and report data on the country's HFC consumption. The registry of medium and large end users, once implemented, will allow the NOU to better understand and control major users of HFCs in the country. The NOU will continue to monitor the project's implementation. The Government will maintain effective control measures established during previous projects and strengthen cooperation with customs, including through continued training and upgrading the central laboratory. Verifications of HFC consumption will be performed by an independent consultant, following guidelines similar to those for HCFCs. The Government of Angola has committed to place a ban on the import of HFC-based domestic and stand-alone commercial refrigeration units by 1 January 2029.

Impact on the climate

98. The activities proposed, including refrigerant recovery and reuse and improved refrigerant containment, indicate that the implementation of stage I of the KIP will reduce refrigerant emissions into the atmosphere, resulting in climate benefits. A calculation of the impact on the climate of the activities in the KIP indicates that by 2029, Angola will have reduced its emissions by approximately 387,800 CO₂-eq tonnes of HFCs, calculated as the difference between the HFC baseline for compliance and the 2029 target, assuming that all consumed HFCs would eventually have been emitted.

Draft Agreement

99. A draft Agreement between the Government of Angola and the Executive Committee for stage I of the KIP is contained in annex II to the present document.

Coordination of activities in the servicing sector under HCFC phase-out and HFC phase-down plans

100. The Government of Angola will implement stage I of the KIP and stage III of the HPMP in a coordinated manner to avoid duplication of activities. Annex III summarizes the simultaneous implementation of activities under the HPMP and the KIP.

VI. Recommendation

101. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for Angola for the period 2025–2030 to reduce HFC consumption by 10 per cent of the country's baseline, in the amount of US \$924,036, plus agency support costs of US \$64,682, for UNDP;
- (b) Noting that 387,800 CO₂-equivalent tonnes of HFCs will be deducted from the starting point for sustained aggregate reductions in HFC consumption that will be established on the basis of guidance provided by the Executive Committee;
- (c) Further noting that the Government of Angola will put in place a ban on the import of HFC-based domestic and stand-alone commercial refrigeration units by 1 January 2029;
- (d) Inviting the Government of Angola, should it wish to do so, to include 2023 in its verification of HFC consumption;
- (e) Approving the draft Agreement between the Government of Angola and the Executive Committee for the reduction in consumption of HFCs in accordance with stage I of the KIP, contained in annex II to the present document; and
- (f) Approving the first tranche of stage I of the KIP for Angola and the corresponding tranche implementation plan, in the amount of US \$385,563, plus agency support costs of US \$26,989, for UNDP.

Annex I

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF ANGOLA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE III OF THE HCFC PHASE-OUT MANAGEMENT PLAN

Purpose

1. This Agreement represents the understanding of the Government of Angola (the “Country”) and the Executive Committee with respect to the reduction of controlled use of the ozone-depleting substances (ODS) set out in Appendix 1-A (“The Substances”) to a sustained level of zero ODP tonnes by 1 January 2030 in compliance with Montreal Protocol schedule.
2. The Country agrees to meet the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for all Substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of the Substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for all of the Substances specified in Appendix 1-A, and in respect to any consumption of each of the Substances that exceeds the level defined in row 4.1.3 (remaining consumption eligible for funding).
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country agrees to implement this Agreement in accordance with stage III of the HCFC phase-out management plan approved (“the Plan”). In accordance with subparagraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of the Substances as set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

Conditions for funding release

5. The Executive Committee will only provide the Funding in accordance with the Funding Approval Schedule when the Country satisfies the following conditions at least eight weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;
 - (b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;
 - (c) That the Country had submitted a Tranche Implementation Report in the form of Appendix 4-A (“Format of Tranche Implementation Reports and Plans”) covering each previous calendar year; that it had achieved a significant level of implementation of

activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

- (d) That the Country has submitted a Tranche Implementation Plan in the form of Appendix 4-A covering each calendar year until and including the year for which the funding schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

Monitoring

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same Appendix.

Flexibility in the reallocation of funds

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all of the approved funds, according to the evolving circumstances to achieve the smoothest reduction of consumption and phase-out of the Substances specified in Appendix 1-A:

- (a) Reallocations categorized as major changes must be documented in advance either in a Tranche Implementation Plan as foreseen in subparagraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted eight weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
 - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
 - (ii) Changes which would modify any clause of this Agreement;
 - (iii) Changes in the annual levels of funding allocated to individual bilateral or implementing agencies for the different tranches;
 - (iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;
 - (v) Changes in alternative technologies, on the understanding that any submission for such a request would identify the associated incremental costs, the potential impact to the climate, and any differences in ODP tonnes to be phased out if applicable, as well as confirm that the Country agrees that potential savings related to the change of technology would decrease the overall funding level under this Agreement accordingly;
- (b) Reallocations not categorized as major changes may be incorporated in the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report; and
- (c) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

Considerations for the refrigeration servicing sector

8. Specific attention will be paid to the execution of the activities in the refrigeration servicing sector included in the Plan, in particular:

- (a) The Country would use the flexibility available under this Agreement to address specific needs that might arise during project implementation; and
- (b) The Country and relevant bilateral and/or implementing agencies would take into consideration relevant decisions on the refrigeration servicing sector during the implementation of the Plan.

Bilateral and implementing agencies

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNDP has agreed to be the lead implementing agency (the “Lead IA”) in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring coordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to independent verification as per subparagraph 5(b). The role of the Lead IA is contained in Appendix 6-A. The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 2.2 of Appendix 2-A.

Non-compliance with the Agreement

11. Should the Country, for any reason, not meet the Targets for the elimination of the Substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all of its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each ODP kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement, and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decisions that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to the information necessary to verify compliance with this Agreement.

Date of completion

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in

Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per subparagraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per subparagraphs 1(a), 1(b), 1(d), and 1(e) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

Validity

15. All of the conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

16. This Agreement may be modified or terminated only by mutual written agreement between the Government of the Country and the Executive Committee of the Multilateral Fund.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substance	Annex	Group	Starting point for aggregate reductions in consumption (ODP tonnes)
HCFC-22	C	I	15.95

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2025	2026-2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	5.18	5.18	5.18	5.18	0.00	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	5.18	5.18	5.18	5.18	0.00	n/a
2.1	Lead IA (UNDP) agreed funding (US \$)	258,689	0	179,489	0	81,822	520,000
2.2	Support costs for Lead IA (US \$)	18,108	0	12,564	0	5,728	36,400
3.1	Total agreed funding (US \$)	258,689	0	179,489	0	81,822	520,000
3.2	Total support costs (US \$)	18,108	0	12,564	0	5,728	36,400
3.3	Total agreed costs (US \$)	276,797	0	192,053	0	87,550	556,400
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)						5.18
4.1.2	Phase-out of HCFC-22 to be achieved in previously approved projects (ODP tonnes)						10.77
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)						0.00

* Date of completion of stage II as per stage II Agreement: 31 December 2026

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the second meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of five parts:

- (a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase out of the Substances, how the different activities contribute to it, and how they relate to each other. The report should include the amount of ODS phased out as a direct result from the implementation of activities, by substance, and the alternative technology used and the related phase-in of alternatives, to allow the Secretariat to provide to the Executive Committee information about the resulting change in climate relevant emissions. The report should further highlight successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, uses of the flexibility for reallocation of funds during implementation of a tranche, as provided for in paragraph 7 of this Agreement, or other changes;
- (b) An independent verification report of the Plan results and the consumption of the Substances, as per subparagraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification has to be provided together with each tranche request and will have to provide verification of the consumption for all relevant years as specified in subparagraph 5(a) of the Agreement for which a verification report has not yet been acknowledged by the Committee;
- (c) A written description of the activities to be undertaken during the period covered by the requested tranche, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the plan will be provided by calendar year. The description should also include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall plan. This description of future activities can be submitted as a part of the same document as the narrative report under subparagraph (a) above;
- (d) A set of quantitative information for all Tranche Implementation Reports and Plans, submitted through an online database; and
- (e) An Executive Summary of about five paragraphs, summarizing the information of the above subparagraphs 1(a) to 1(d).

2. In the event that in a particular year two stages of the Plan are being implemented in parallel, the following considerations should be taken in preparing the Tranche Implementation Reports and Plans:

- (a) The Tranche Implementation Reports and Plans referred to as part of this Agreement, will exclusively refer to activities and funds covered by this Agreement; and
- (b) If the stages under implementation have different HCFC consumption targets under Appendix 2-A of each Agreement in a particular year, the lower HCFC consumption target will be used as reference for compliance with these Agreements and will be the basis for the independent verification.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. Overall supervision will be provided by the Ministry of Environment, through the national ozone unit (“NOU”), with assistance from the Lead IA.
2. Consumption will be monitored and determined from official data of import and export of substances as registered by the relevant Government departments.
3. The NOU will compile and report the following data and information each year on or before the deadlines:
 - (a) Annual reports on the consumption of the substances to be submitted to the Ozone Secretariat; and
 - (b) Annual reports on the progress in implementing the Plan to be submitted to the Executive Committee of the Multilateral Fund.
4. The Lead IA will have full access to relevant technical and financial information related to the implementation of the Plan.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:
 - (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country’s Plan;
 - (b) Assisting the Country in preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;
 - (c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan consistent with Appendix 4-A;
 - (d) Ensuring that the experiences and progress is reflected in updates of the overall plan and in future Tranche Implementation Plans consistent with subparagraphs 1(c) and 1(d) of Appendix 4-A;
 - (e) Fulfilling the reporting requirements for the Tranche Implementation Reports and Plans and the overall plan as specified in Appendix 4-A for submission to the Executive Committee;
 - (f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual tranche implementation reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HCFC consumption targets had been met;
 - (g) Ensuring that appropriate independent technical experts carry out the technical reviews;
 - (h) Carrying out required supervision missions;

- (i) Ensuring the presence of an operating mechanism to allow effective, transparent implementation of the Tranche Implementation Plan and accurate data reporting;
- (j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country, the allocation of the reductions to the different budget items and to the funding of the Lead IA;
- (k) Ensuring that disbursements made to the Country are based on the use of the indicators;
- (l) Providing assistance with policy, management and technical support when required; and
- (m) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the Plan's results and the consumption of the Substances mentioned in Appendix 1-A, as per subparagraph 5(b) of the Agreement and subparagraph 1(b) of Appendix 4-A.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$180 per ODP kg of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the target specified in row 1.2 of Appendix 2-A has not been met, on the understanding that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years.

2. In the event that the penalty needs to be applied for a year in which there are two Agreements in force (two stages of the Plan being implemented in parallel) with different penalty levels, the application of the penalty will be determined on a case-by-case basis taking into consideration the specific sectors that lead to the non-compliance. If it is not possible to determine a sector, or both stages are addressing the same sector, the penalty level to be applied would be the largest.

Annex II

DRAFT AGREEMENT BETWEEN THE GOVERNMENT OF ANGOLA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROFLUOROCARBONS IN ACCORDANCE WITH STAGE I OF THE KIGALI HFC IMPLEMENTATION PLAN

(Period: 2025–2030)

Purpose

1. This Agreement represents the understanding of the Government of Angola (“the Country”) and the Executive Committee with respect to the reduction of controlled use of Annex F substances set out in Appendix 1-A (“The Substances”) to a sustained level of 3,490,200 CO₂-equivalent (CO₂-eq) tonnes by 1 January 2029 in compliance with the Montreal Protocol schedule and the terms of this Agreement.
2. The Country agrees to meet the annual consumption limits of Annex F substances as set out in row 1.2 of Appendix 2-A (“The Targets, and Funding”) in this Agreement as well as in the Montreal Protocol reduction schedule for Annex F substances mentioned in Appendix 1-A. The Country accepts that, by its acceptance of this Agreement and performance by the Executive Committee of its funding obligations described in paragraph 3, it is precluded from applying for or receiving further funding from the Multilateral Fund in respect to any consumption of Annex F substances that exceeds the level defined in row 1.2 of Appendix 2-A as the final reduction step under this Agreement for Annex F substances specified in Appendix 1-A, and in respect to any consumption of Annex F substances that exceeds the level defined in row 4.3 (remaining consumption eligible for funding).
3. Subject to compliance by the Country with its obligations set out in this Agreement, the Executive Committee agrees, in principle, to provide the funding set out in row 3.1 of Appendix 2-A to the Country. The Executive Committee will, in principle, provide this funding at the Executive Committee meetings specified in Appendix 3-A (“Funding Approval Schedule”).
4. The Country agrees to implement this Agreement in accordance with stage I of the Kigali HFC implementation plan (“the Plan”) as approved. In accordance with subparagraph 5(b) of this Agreement, the Country will accept independent verification of the achievement of the annual consumption limits of Annex F substances set out in row 1.2 of Appendix 2-A of this Agreement. The aforementioned verification will be commissioned by the relevant bilateral or implementing agency.

Conditions for funding release

5. The Executive Committee will only provide the Funding, in accordance with the Funding Approval Schedule, when the Country satisfies the following conditions at least 10 weeks in advance of the applicable Executive Committee meeting set out in the Funding Approval Schedule:
 - (a) That the Country has met the Targets set out in row 1.2 of Appendix 2-A for all relevant years. Relevant years are all years since the year in which this Agreement was approved. Years for which there are no due country programme implementation reports at the date of the Executive Committee meeting at which the funding request is being presented are exempted;
 - (b) That the meeting of these Targets has been independently verified for all relevant years, unless the Executive Committee decided that such verification would not be required;
 - (c) That the Country had submitted a Tranche Implementation Report in accordance with Appendix 4-A (“Format of Tranche Implementation Reports and Plans”) covering each

previous calendar year; that it had achieved a significant level of implementation of activities initiated with previously approved tranches; and that the rate of disbursement of funding available from the previously approved tranche was more than 20 per cent; and

- (d) That the Country has submitted a Tranche Implementation Plan in accordance with Appendix 4-A covering each calendar year until and including the year for which the Funding Approval Schedule foresees the submission of the next tranche or, in case of the final tranche, until completion of all activities foreseen.

Monitoring

6. The Country will ensure that it conducts accurate monitoring of its activities under this Agreement. The institutions set out in Appendix 5-A (“Monitoring Institutions and Roles”) will monitor and report on implementation of the activities in the previous Tranche Implementation Plans in accordance with their roles and responsibilities set out in the same appendix.

Flexibility in the reallocation of funds

7. The Executive Committee agrees that the Country may have the flexibility to reallocate part or all approved funds, according to the evolving circumstances, to achieve the smoothest reduction of consumption and phase-down of Annex F substances specified in Appendix 1-A, in accordance with the following considerations:

- (a) Reallocations categorized as major changes must be documented in advance, either in a Tranche Implementation Plan as foreseen in subparagraph 5(d) above, or as a revision to an existing Tranche Implementation Plan to be submitted 10 weeks prior to any meeting of the Executive Committee, for its approval. Major changes would relate to:
 - (i) Issues potentially concerning the rules and policies of the Multilateral Fund;
 - (ii) Changes that would modify any clause of this Agreement;
 - (iii) Changes in the annual levels of funding allocated to the individual bilateral or implementing agencies for the different tranches;
 - (iv) Provision of funding for activities not included in the current endorsed Tranche Implementation Plan, or removal of an activity in the Tranche Implementation Plan, with a cost greater than 30 per cent of the total cost of the last approved tranche;
 - (v) Changes in alternative technologies, on the understanding that any submission for such a request would identify the associated incremental costs, the potential impact on the climate, and any differences in CO₂-eq tonnes to be phased down if applicable, as well as confirm that the Country agrees that potential savings related to the change of technology would accordingly decrease the overall funding level under this Agreement;
- (b) Reallocations not categorized as major changes may be incorporated into the approved Tranche Implementation Plan, under implementation at the time, and reported to the Executive Committee in the subsequent Tranche Implementation Report; and
- (c) Any remaining funds held by the bilateral or implementing agencies or the Country under the Plan will be returned to the Multilateral Fund upon completion of the last tranche foreseen under this Agreement.

8. Specific attention will be paid to the execution of activities in the refrigeration servicing sector included in the Plan, in particular that the Country may use the flexibility available under this Agreement to address specific needs that might arise during project implementation.

Bilateral and implementing agencies

9. The Country agrees to assume overall responsibility for the management and implementation of this Agreement and of all activities undertaken by it or on its behalf to fulfil the obligations under this Agreement. UNDP has agreed to be the lead implementing agency (the “Lead IA”) in respect of the Country’s activities under this Agreement. The Country agrees to evaluations, which might be carried out under the monitoring and evaluation work programmes of the Multilateral Fund or under the evaluation programme of the Lead IA taking part in this Agreement.

10. The Lead IA will be responsible for ensuring coordinated planning, implementation and reporting of all activities under this Agreement, including but not limited to the independent verification as per subparagraph 5(b). The role of the Lead IA is contained in Appendix 6-A. The Executive Committee agrees, in principle, to provide the Lead IA with the fees set out in row 2.2 of Appendix 2-A.

Non-compliance with the Targets in the Agreement

11. Should the Country, for any reason, not meet the Targets for the elimination of Annex F substances set out in row 1.2 of Appendix 2-A or otherwise does not comply with this Agreement, then the Country agrees that it will not be entitled to the Funding in accordance with the Funding Approval Schedule. At the discretion of the Executive Committee, funding will be reinstated according to a revised Funding Approval Schedule determined by the Executive Committee after the Country has demonstrated that it has satisfied all its obligations that were due to be met prior to receipt of the next tranche of funding under the Funding Approval Schedule. The Country acknowledges that the Executive Committee may reduce the amount of the Funding by the amount set out in Appendix 7-A (“Reductions in Funding for Failure to Comply”) in respect of each CO₂-eq kg of reductions in consumption not achieved in any one year. The Executive Committee will discuss each specific case in which the Country did not comply with this Agreement and take related decisions. Once decisions are taken, the specific case of non-compliance with this Agreement will not be an impediment for the provision of funding for future tranches as per paragraph 5 above.

12. The Funding of this Agreement will not be modified on the basis of any future Executive Committee decisions that may affect the funding of any other consumption sector projects or any other related activities in the Country.

13. The Country will comply with any reasonable request of the Executive Committee and the Lead IA to facilitate implementation of this Agreement. In particular, it will provide the Lead IA with access to the information necessary to verify compliance with this Agreement.

Date of completion

14. The completion of the Plan and the associated Agreement will take place at the end of the year following the last year for which a maximum allowable total consumption level has been specified in Appendix 2-A. Should at that time there still be activities that are outstanding, and which were foreseen in the last Tranche Implementation Plan and its subsequent revisions as per subparagraph 5(d) and paragraph 7, the completion of the Plan will be delayed until the end of the year following the implementation of the remaining activities. The reporting requirements as per subparagraphs 1(a), 1(b), and 1(d) of Appendix 4-A will continue until the time of the completion of the Plan unless otherwise specified by the Executive Committee.

Validity

15. All conditions set out in this Agreement are undertaken solely within the context of the Montreal Protocol and as specified in this Agreement. All terms used in this Agreement have the meaning ascribed to them in the Montreal Protocol unless otherwise defined herein.

16. This Agreement may be modified or terminated only by mutual written agreement of the Country and the Executive Committee of the Multilateral Fund.

APPENDICES

APPENDIX 1-A: THE SUBSTANCES

Substances	Starting point for aggregate reductions in consumption (CO ₂ -eq tonnes)
HFCs	To be determined (TBD)

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars		2025	2026	2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex F substances	%	freeze	freeze	freeze	freeze	10	10	n/a
		CO ₂ -eq tonnes	3,878,000	3,878,000	3,878,000	3,878,000	3,490,200	3,490,200	n/a
1.2	Maximum allowable total consumption of Annex F substances	Reduction in %	0.0	0.0	0.0	0.0	10.0	10.0	n/a
		CO ₂ -eq tonnes	3,878,000	3,878,000	3,878,000	3,878,000	3,490,200	3,490,200	n/a
2.1	Lead IA (UNDP) agreed funding (US \$)		385,563	0	0	399,058	0	139,415	924,036
2.2	Support costs for Lead IA (US \$)		26,989	0	0	27,934	0	9,759	64,682
3.1	Total agreed funding (US \$)		385,563	0	0	399,058	0	139,415	924,036
3.2	Total support costs (US \$)		26,989	0	0	27,934	0	9,759	64,682
3.3	Total agreed costs (US \$)		412,552	0	0	426,992	0	149,174	988,718
4.1	Deduction of HFCs under this Agreement (CO ₂ -eq tonnes)								387,800
4.2	Deduction of HFCs from previously approved projects (CO ₂ -eq tonnes)								0
4.3	Remaining eligible consumption for HFCs (CO ₂ -eq tonnes)								TBD

APPENDIX 3-A: FUNDING APPROVAL SCHEDULE

1. Funding for the future tranches will be considered for approval at the second meeting of the year specified in Appendix 2-A.

APPENDIX 4-A: FORMAT OF THE TRANCHE IMPLEMENTATION REPORTS AND PLANS

1. The submission of the Tranche Implementation Report and Plans for each tranche request will consist of four parts:

- (a) A narrative report, with data provided by tranche, describing the progress achieved since the previous report, reflecting the situation of the Country in regard to phase-down of Annex F substances, how the different activities contribute to it, and how they relate to each other, including, where applicable, activities related to energy efficiency approved in the context of HFC phase-down pursuant to decision 91/65. The report should include the amount of Annex F substances consumption reduced as a direct result of the implementation of activities, by substance, the alternative technology used and the related

phase in of alternatives, to allow the Secretariat to inform the Executive Committee on the resulting change in climate relevant emissions. The report should also include quantitative information on the activities implemented and further highlight the successes, experiences, and challenges related to the different activities included in the Plan, reflecting any changes in the circumstances in the Country, and providing other relevant information. The report should also include information on and justification for any changes vis-à-vis the previously submitted Tranche Implementation Plan(s), such as delays, use of flexibility for the reallocation of funds during implementation of a tranche as provided for in paragraph 7 of this Agreement, or other changes;

- (b) An independent verification report on the Plan's results and the consumption of Annex F substances, as per subparagraph 5(b) of the Agreement. If not decided otherwise by the Executive Committee, such a verification of consumption data must be provided with each tranche request, covering all relevant years for which a verification report has not yet been acknowledged by the Committee, as specified in subparagraph 5(a) of the Agreement;
- (c) A written description of the activities to be undertaken during the period covered by the requested tranche including quantitative information, highlighting implementation milestones, the time of completion and the interdependence of the activities, and taking into account experiences made and progress achieved in the implementation of earlier tranches; the data in the Plan will be provided by calendar year. The description should include a reference to the overall Plan and progress achieved, as well as any possible changes to the overall Plan that are foreseen. The description should also specify and explain in detail such changes to the overall Plan. This description of future activities can be submitted as a part of the same document as the narrative report under subparagraph 1(a) above; and
- (d) An Executive Summary of about five paragraphs, summarizing the information contained in subparagraphs 1(a) to 1(c) above.

APPENDIX 5-A: MONITORING INSTITUTIONS AND ROLES

1. The Ministry of Environment, through the national ozone unit ("NOU"), will lead the design and oversight of Plan activities, including stakeholder coordination, beneficiary selection, and local procurement. It will ensure the use of operational tools aligned with the approved budget and oversee the provision of technical assistance. The NOU will also manage the selection of consultants, implement gender mainstreaming measures, and apply corrective actions as needed.

2. The NOU will organize the collection and analysis of project data, standardize reporting formats, and convene periodic evaluation meetings. It will prepare internal progress reports, annual Plan implementation reports, and tranche submissions for the Executive Committee. The NOU will also monitor gender indicators, track private sector trends in HFC use, and stay updated on alternative technologies through participation in stakeholder-led technical meetings. The Ministry of Environment in the Country will be responsible for the sustainability of consumption reduction targets achieved through the Agreement.

APPENDIX 6-A: ROLE OF THE LEAD IMPLEMENTING AGENCY

1. The Lead IA will be responsible for a range of activities, including at least the following:

- (a) Ensuring performance and financial verification in accordance with this Agreement and with its specific internal procedures and requirements as set out in the Country's Plan;

- (b) Assisting the Country in the preparation of the Tranche Implementation Reports and Plans as per Appendix 4-A;
- (c) Providing independent verification to the Executive Committee that the Targets have been met and associated tranche activities have been completed as indicated in the Tranche Implementation Plan, consistent with Appendix 4-A;
- (d) Ensuring that the experiences and progress are reflected in the updates to the overall Plan and in the future Tranche Implementation Plans, consistent with subparagraph 1(c) of Appendix 4-A;
- (e) Fulfilling the reporting requirements of the Tranche Implementation Reports and Plans and of the overall Plan as specified in Appendix 4-A for submission to the Executive Committee;
- (f) In the event that the last funding tranche is requested one or more years prior to the last year for which a consumption target had been established, annual Tranche Implementation Reports and, where applicable, verification reports on the current stage of the Plan should be submitted until all activities foreseen had been completed and HFC consumption targets had been met;
- (g) Ensuring that appropriate independent technical experts carry out the technical reviews;
- (h) Carrying out the required supervision missions;
- (i) Ensuring the presence of an operating mechanism to allow for an effective and transparent implementation of the Tranche Implementation Plan and accurate data reporting;
- (j) In case of reductions in funding for failure to comply in accordance with paragraph 11 of the Agreement, to determine, in consultation with the Country, the allocation of the reductions to the different budget items and to the funding of the Lead IA;
- (k) Ensuring that disbursements made to the Country are based on the use of the indicators;
- (l) Providing assistance with the policy, management and technical support when required; and
- (m) Timely releasing funds to the Country/participating enterprises for completing the activities related to the project.

2. After consultation with the Country and taking into account any views expressed, the Lead IA will select and mandate an independent entity to carry out the verification of the Plan's results and of the consumption of Annex F substances mentioned in Appendix 1-A, as per subparagraph 5(b) of the Agreement and subparagraph 1(b) of Appendix 4-A.

APPENDIX 7-A: REDUCTIONS IN FUNDING FOR FAILURE TO COMPLY WITH THE TARGETS IN THE AGREEMENT

1. In accordance with paragraph 11 of the Agreement, the amount of funding provided may be reduced by US \$4.77 per CO₂-eq tonne of consumption beyond the level defined in row 1.2 of Appendix 2-A for each year in which the Target specified in row 1.2 of Appendix 2-A has not been met, on the understanding that the maximum funding reduction would not exceed the funding level of the tranche being requested. Additional measures might be considered in cases where non-compliance extends for two consecutive years. Where the country has failed to comply with the Agreement due to illegal trade, the reduction in

funding would not be applied if the illegally traded controlled substances are seized and subsequently confiscated, destroyed, exported, or returned to the country of origin.

Annex III

**SIMULTANEOUS IMPLEMENTATION OF THE HCFC PHASE-OUT MANAGEMENT PLAN
AND THE KIGALI HFC IMPLEMENTATION PLAN IN ANGOLA**

Category of activity	HPMP – stage III		KIP – stage I		HPMP+KIP combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
Provision of tools to technicians	Equip five RAC training centres with training equipment for HC-based systems, including one with additional equipment for CO ₂ -based systems.	136,900	Provide 75 sets of tools to RAC technicians for HC-based systems. Procure 28 automotive recovery systems for MAC technicians. Procure 12 sets of recovery and recycling training equipment to MAC training centres.	325,025	461,925
Training of RAC technicians	Develop an electronic registry system for trained technicians to register their training and technical capacity.	13,120	Develop a labour competency standard for RAC technicians. Train 600 technicians in good servicing practices, leak prevention, safe handling of flammable and high-pressure refrigerants, including at least three workshops on CO ₂ .	128,880	142,000
Training of MAC technicians			Identify and register MAC servicing workshops in the country. Develop and print a training guide and poster on good MAC servicing practices. Train 12 trainers and 500 technicians in good servicing practices for MAC.	110,500	110,500
Refrigerant management	Upgrade a training institute to an RRR centre, provide recovery equipment to two recycling support centres for use by specialized technicians, and provide training to technicians on the management of RRR equipment. Create an electronic system for recovery and recycling activities, develop a model for the recovered refrigerant market, and promote activities to the public.	93,080			93,080

Category of activity	HPMP – stage III		KIP – stage I		HPMP+KIP combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
Strengthening of regulatory framework	Update the regulatory framework for HCFC phase-out and import controls, including updates to the licensing and quota system. Form a steering committee with key stakeholders to evaluative regulatory changes and ban the import of HCFC-141b and HCFC-based RAC equipment.	61,500	Update the regulatory framework to HFC phase-out and import controls, including assessment of current policies; formulate and adopt the new measures; and disseminate information to stakeholders. Create a national registry of medium/large end users. Study on the economic impact of an accelerated conversion of RAC equipment.	75,000	136,500
Provision of tools to customs			Procure six wide range refrigerant identifiers for main customs ports. Upgrade the central customs laboratory with refrigerant identification laboratory equipment to identify HFCs and prevent illegal trade.	136,000	136,000
Training of customs officers and strengthening of customs	Update the border control handbook to include HCFCs; train 120 customs officers on trade control, identifying new substances, and prevention of illegal trade; and train 120 brokers and importers on HCFC regulations and compliance with the Montreal Protocol.	102,000	Update the border control handbook to include the last amendment to the HS codes for HFCs; update the customs training programme including on using new refrigerant identifiers, trade control, identifying new substances, and prevention of illegal trade; update the licensing and quota system to be based on CO ₂ -eq tonnes and include exports; and update HS codes and other policies as necessary. Strengthen the national capacity to update the policy and regulatory framework, including codes and standards for HFC control; and support the design and implementation of customs capacity-building activities, including on updates to the licensing	72,335	174,335

Category of activity	HPMP – stage III		KIP – stage I		HPMP+KIP combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
			and quota system and customs training.		
Awareness	Design and carry out an awareness campaign targeting technicians, stakeholders, end users and the public on new regulatory measures, HCFC prohibitions, phase out obligations, alternative technologies, and energy efficiency. Hold four information workshops for RAC end users on the HCFC phase out.	53,300			53,300
PMU	Project coordination and monitoring activities.	60,100	Project coordination and monitoring activities.	76,296	136,396
Total	-	520,000	-	924,036	1,444,036
Percentage of total (%)	36		64		100